

## APPENDIX A

### WHY ARE ARIZONA DROPOUT RATES NOT COMPARABLE TO THOSE FROM OTHER STATES?

Consumers of information about dropouts are confronted with a variety of statistics from multiple sources. The purpose of the current paper is to outline how dropout rates are measured in Arizona, and to describe why comparisons between Arizona and other states are difficult to make.

#### Arizona Dropout Rate Definition

In Arizona, the collection of dropout rate data is mandated by the Arizona Legislature. The Arizona dropout rate includes all students who dropout out of school, either during the school year or during the preceding summer. The count of dropouts is assessed by comparing it to the total number of students who were enrolled at the end of the previous school year or at any point during the academic year in question. The ratio is described below, for a school's 1999-2000 dropout rate:

$$\frac{\text{Summer 1999 Dropouts} + \text{School Year 1999-2000 Dropouts}}{\text{Students Enrolled at the end of 1998-1999} + \text{Students Enrolled at any point during School Year 1999-2000}}$$

Conceptually, the same ratio is applied at each level of analysis, including dropout rates for school, district, county, and state levels. The actual formula that is applied varies slightly depending on the level of analysis to prevent redundancy at higher levels.

#### NCES Dropout Rate Definitions

The National Center for Education Statistics (NCES) is a division of the United States Department of Education and focuses on collection and analysis of data pertaining to education in the United States. Each year, NCES publishes statistics describing dropouts (Kaufman, et al., 2000). The three types of dropout statistics reported by NCES are described below, including the data source for each.

#### Status Dropout Rates: Current Population Survey

Each month, the U.S. Bureau of the Census gathers sample data about the United States population through the Current Population Survey (CPS). Information gathered through this instrument includes demographics and workforce participation for each region. In October of each year, an education supplement is attached to the CPS. Information gathered through this supplement allows NCES to assess, among other educational issues, the proportion of the population age 16 through 24 who have not completed a high school program, regardless of when, or where, they dropped out. This proportion, the *status dropout rate*, can be used to describe the cumulative nature of our nation's dropout problem, as well as the demand for education and training specific to the needs of these dropouts. Through sampling, data collected each year are useful in describing status dropout rates by region; NCES also uses three-year averages to describe status dropout rates for each state. However, state-level status dropout rates are less useful as school accountability measures. **While status dropout rates effectively estimate the number of dropouts in a state, because they do**

**not take into account *where* respondents dropped out, they do not directly assess the performance of schools in that state** -- especially in states such as Arizona where the population is rapidly growing. It seems reasonable to assume that those individuals contributing to population growth in Arizona did not attend school in Arizona.

### **Event Dropout Rates: Current Population Survey**

Also collected on the CPS education supplement is information about whether respondents dropped out in the previous twelve months. Specifically, a ratio is formed: the numerator consists of individuals age 15 through 24 who were reported as enrolled in Grades 10, 11, or 12 in October of the previous year (in a public *or* private school), but have since left school. The denominator consists of *all* individuals who were reported as enrolled in Grades 10, 11, or 12 in October of the previous year. Because these event dropout rates share the CPS as a data source with status dropout rates, they also share some limitations: regional rates may be computed for each year, while state-level rates may be computed as a three-year average (and, district- and school-level rates may not be computed at all). Event dropout rates estimated by using CPS data more closely reflect how effective educators in a state are at preventing students from dropping out. However, the CPS event dropout rate does not separate those who dropped out in Arizona and remained in the state from those who dropped out elsewhere and have lived in Arizona for less than twelve months. So, for state-level event dropout rates, rather than relying exclusively on three-year averages of sample data, it may be considered more appropriate to look to counts of event dropout rates, reported by states to NCES via the Common Core of Data, described next.

### **Event Dropout Rates: Common Core of Data**

**Definition.** The Common Core of Data (CCD) is an annual survey administered by NCES to state education agencies. In addition to other information requested on the CCD, states report event dropout rates based on counts of students who have dropped out of public school. NCES defines the CCD event dropout rate as described below, for a 1999-2000 dropout rate:

<p>Students Enrolled at some point during the preceding 12 months, but are not enrolled by October 1, 2000, and did not transfer, die, or graduate</p> <hr style="width: 50%; margin: 10px auto;"/> <p>Students Enrolled on October 1, 1999</p>
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As a part of this definition, those students not accounted for on October 1 are regarded as dropouts. For 1999-2000 school year event dropout rates, the numerator includes those individuals who were enrolled on October 1, 1999 and/or at any point during the following 12 months, but who dropped out and failed to re-enroll before October 1, 2000. Also considered dropouts would be those who dropped out over the summer of 2000.

**Deviations from the CCD definition.** Researchers have examined states' practices in the reporting of event dropout rates (Winglee, et al., 2000). Forty-six states event dropout rates were examined for years 1993, 1994, and 1995. Researchers identified three main ways states' reporting of event dropout rates deviated from the definition established by NCES (and therefore, the definitions of other states). First, states vary by **the reporting calendar** employed; while NCES defines a reporting period that begins October of each year (i.e. the first day of school), in 1995, sixteen states'

(including Arizona's) reporting periods begin in June of each year (i.e. the last day of school). Next, states vary by their treatment of students who drop out of school over the summer; these students were enrolled at the end of the previous school year, but fail to re-enroll for school in the Fall, and are not transfer students, deceased, or graduates. The NCES event dropout rate definition regards **summer dropouts** as having dropped out from the grade and year for which they failed to return (as does Arizona). In 1995, five states report summer dropouts as having dropped out of the grade and year for which they were most recently enrolled (i.e. when the school year ended). Lastly, states vary by their treatment of GED program students. NCES regards students who leave school for the purpose of receiving their GED as dropouts (as does Arizona); In 1995, six states deviated from the NCES definition and excluded GED students from the numerator of their dropout rates.

As can be seen in Figure 1, most states deviate from the NCES event dropout rate definition in one of the three identified ways: reporting calendar, summer dropouts, and GED students. Still others differ in multiple ways. Taken as a whole, the data presented in Figure 1 indicate the extent of variation in reporting practices.

***Effects of deviation from the CCD definition.*** In addition to identifying how states deviate in the reporting of event dropout rates, NCES has examined the impact of different reporting practices on the magnitude of rates (Winglee, et al., 2000). When compared to the NCES definition, using a reporting cycle that begins in June (such as that used in Arizona) has been shown to result in a statistically reliable over-reporting of dropouts. Similarly, the exclusion of GED students from a state's dropout numerator has been shown to result in consistently lower event dropout rates. NCES proposes a methodology for comparing state-reported event dropout rates. However, when research on the effects of different reporting practices are coupled with the data represented in Figure 1, it is clear that differences in reporting practices seriously impact direct, state-level event dropout rate comparisons.

### Conclusion

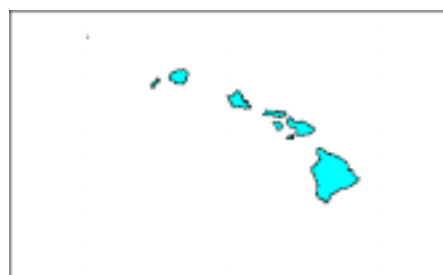
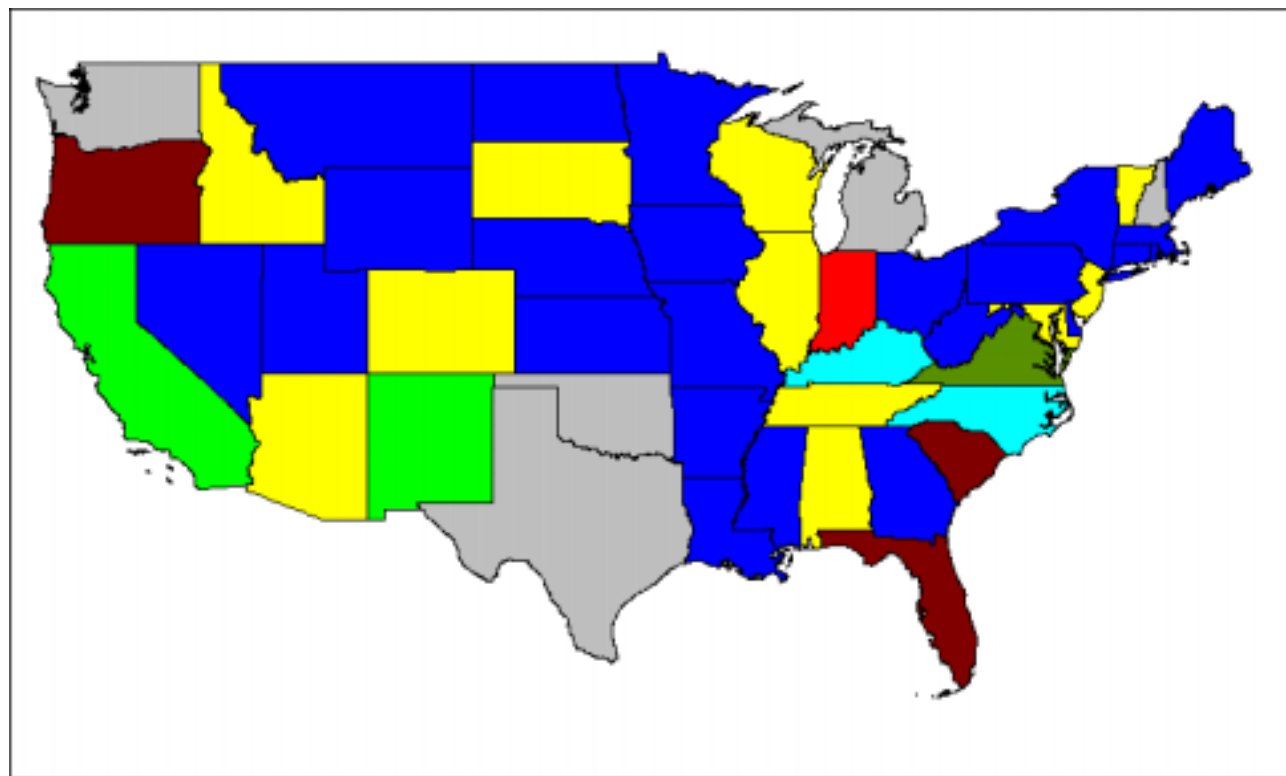
Clearly, a wide variety of data are available to one who must answer the question, *What is Arizona's Dropout Rate?* Given a percentage, those who responsibly report dropout rates to the public must be careful to consider the data source, as well as precisely what is represented in the ratio. Failure to consider this (often overlooked) information likely leads to a confused, ill-informed public. Similarly, selection of an appropriate dropout measure is critical to an informed discussion about education policy and school accountability. Given the measures available, it is most appropriate to utilize the Arizona dropout rate for accountability purposes in Arizona; it takes into account the total number of students that a school had an opportunity to keep in school. The Arizona dropout rate serves as a better accountability measure than would a measure of the recent educational history of the current population (such as the CPS Status and Event Dropout Rates) or would a measure using October 1<sup>st</sup> enrollment as its denominator (such as the CCD Event Dropout Rate).

### References

National Center for Education Statistics (2000). Education statistics quarterly. (NCES 2001-602). Washington, DC: Kaufman, P., et al.

National Center for Education Statistics (2000). A recommended approach to providing high school dropout and completion rates at the state level. (NCES 2000-305). Washington, DC: Winglee, M., et al.

**Figure 1\***  
**Reporting Practices of State Education Agencies**



How States' Dropout Reporting Differed from the CCD Definition in 1995 (counts in parentheses):

Yellow	Alternate reporting calendar	(12)
Dark Red	Alternate reporting calendar AND GED Students	(3)
Green	Alternate reporting calendar AND Summer dropouts	(1)
Light Green	GED Students	(2)
Blue	Same as CCD definition	(23)
Grey	Data not available	(6)
Cyan	Summer dropouts	(3)
Red	GED Students AND Summer dropouts	(1)

\*Data Source: National Center for Education Statistics (2000). *A recommended approach to providing high school dropout and completion rates at the state level.* (NCES 2000-305). Washington, DC: Winglee, M., et al.



